## **ABSTRACT**

Octafluoropropane is produced by a process including a step (1) of reacting hexafluoropropene with hydrogen fluoride in a gas phase at a temperature of from 150 to 450°C in the presence of a fluorination catalyst to obtain 2H-heptafluoropropane and a step (2) of reacting 2H-heptafluoropropane obtained in step (1) with fluorine gas in a gas phase at a temperature of from 250 to 500°C in the absence of a catalyst to obtain octafluoropropane. High-purity octafluoropropane is obtained which can be used in a process for producing a semiconductor device.

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